

Sensor-based approaches for efficient irrigation management of Mediterranean greenhouse vegetable crops

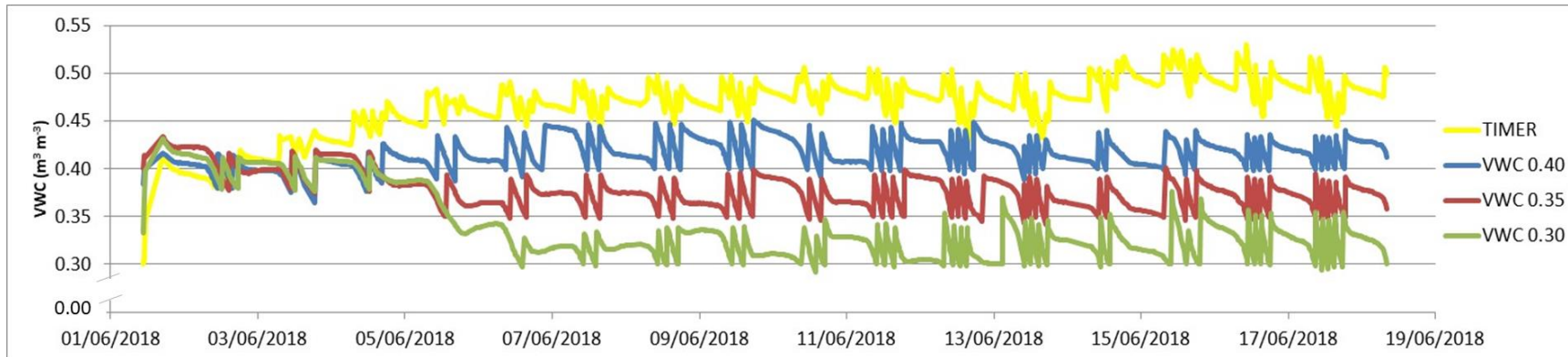
Francesco F. Montesano



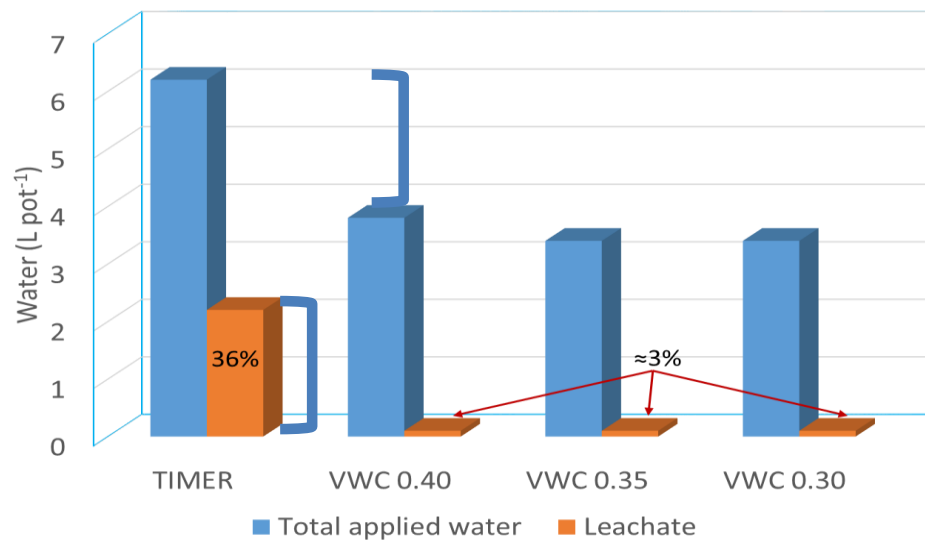
May 29th 2020



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Water saving but no differences on plant growth

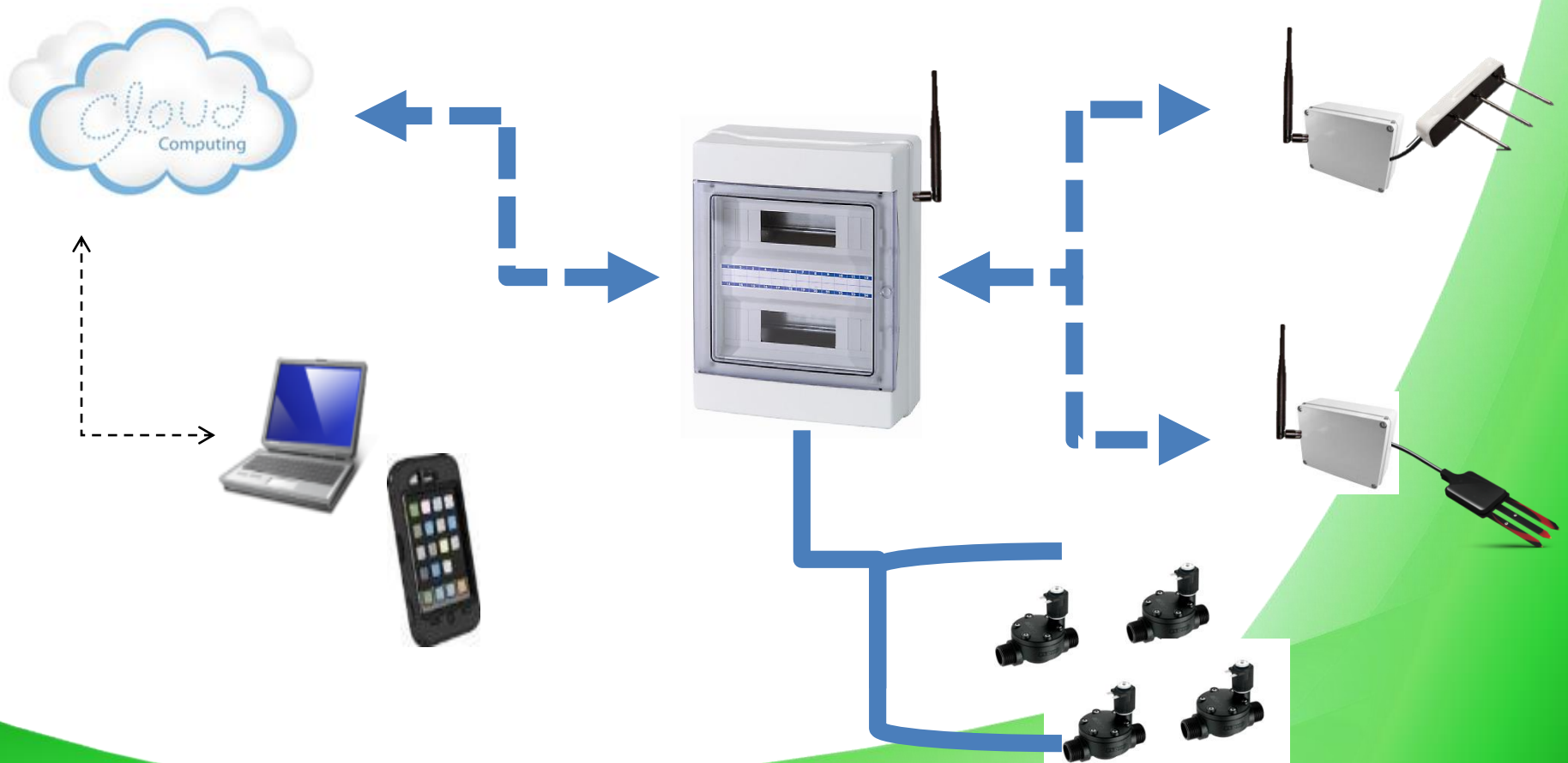


Improvement of quality



Current perspective: **COMMERCIAL APPLICATION**

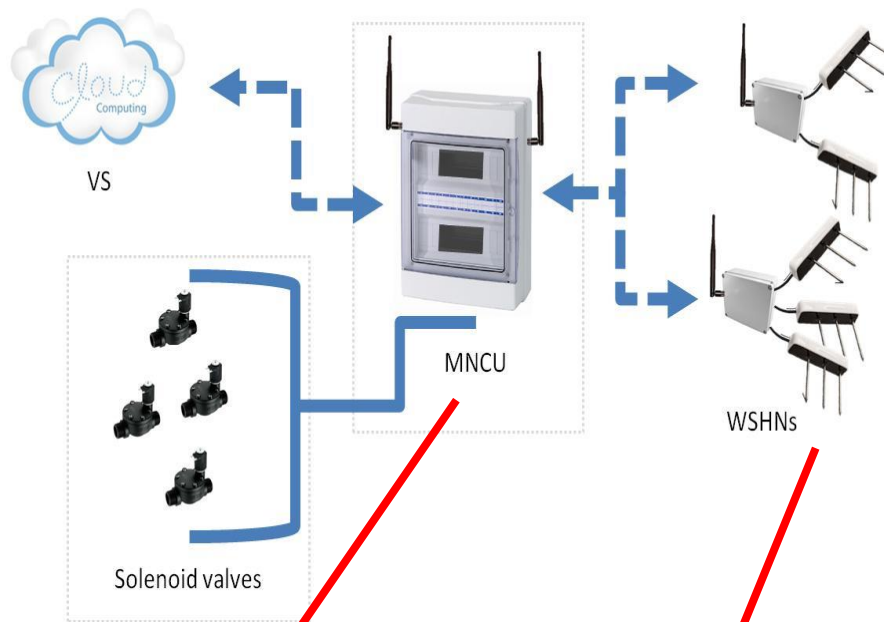
Integrating wireless sensor networks in existing irrigation systems



**Research
institution**

SME

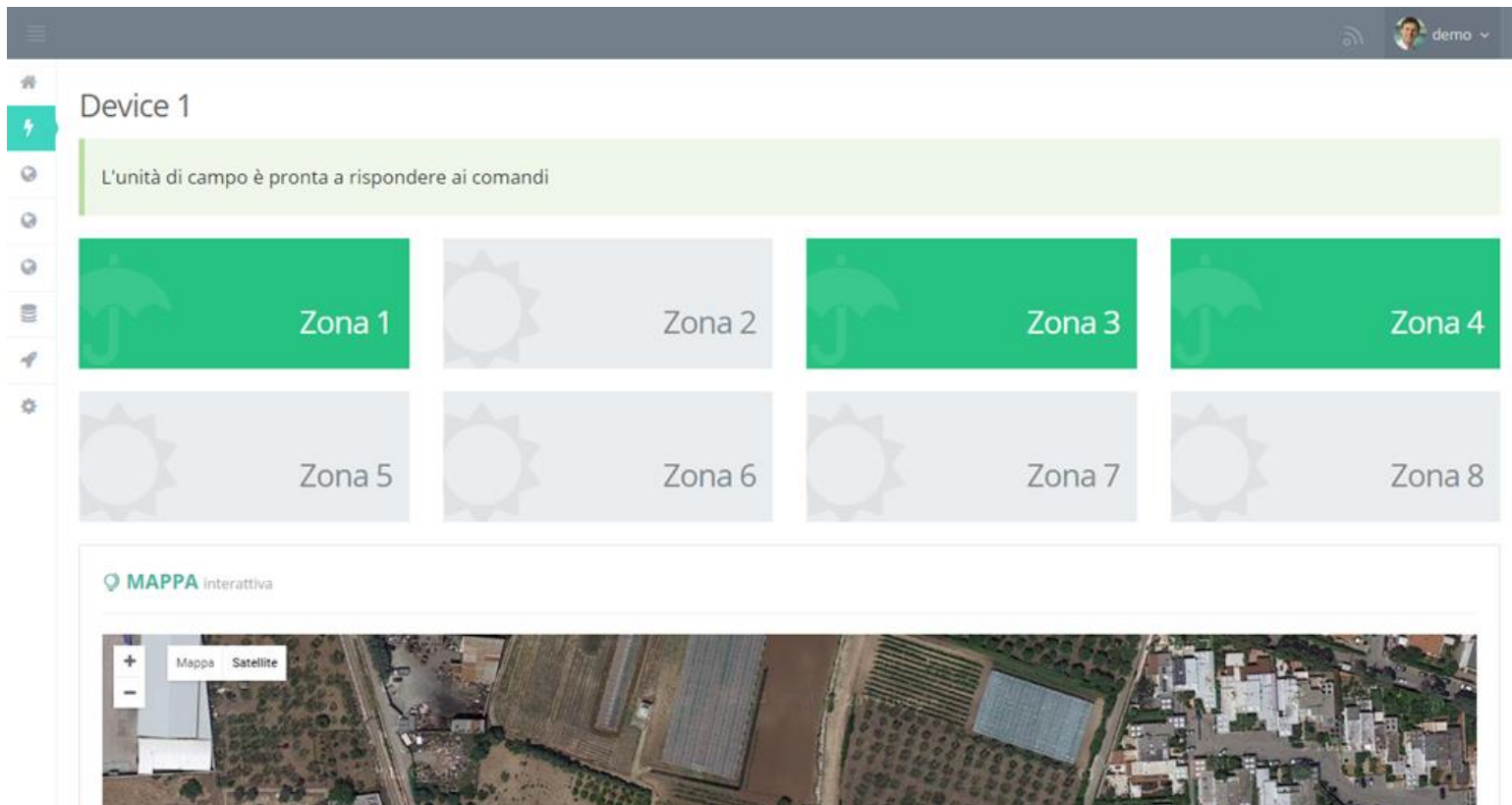




GICK (Greenhouse Irrigation Control Kit)



rainserv.cloudapp.net

The screenshot shows a web application interface for 'Device 1'. At the top, there's a grey header bar with a menu icon, a signal strength indicator, and a user profile labeled 'demo'. Below the header, a green status bar indicates 'L'unità di campo è pronta a rispondere ai comandi'. The main area displays eight zones in a 2x4 grid. Zones 1, 3, and 4 are green with an umbrella icon, while Zones 2, 5, 6, 7, and 8 are grey with a sun icon. At the bottom, there's a section titled 'MAPPA interattiva' showing an aerial satellite view of a landscape with fields and buildings. A small control panel on the left of the map includes a zoom in (+) and zoom out (-) button, and tabs for 'Mappa' and 'Satellite'.

Automation

[New timer](#)
[New elaboration](#)

Zone

Intervention duration

Next scan

Sensors

Measured variable

Elaboration

Set point

Zona A

2016-12-15 10:30:00

Sonda 4
Sonda 8
Sonda 9
Sonda B

Temperature

Mean

Greater than

Pulsed irrigation

Pulse width

Pause

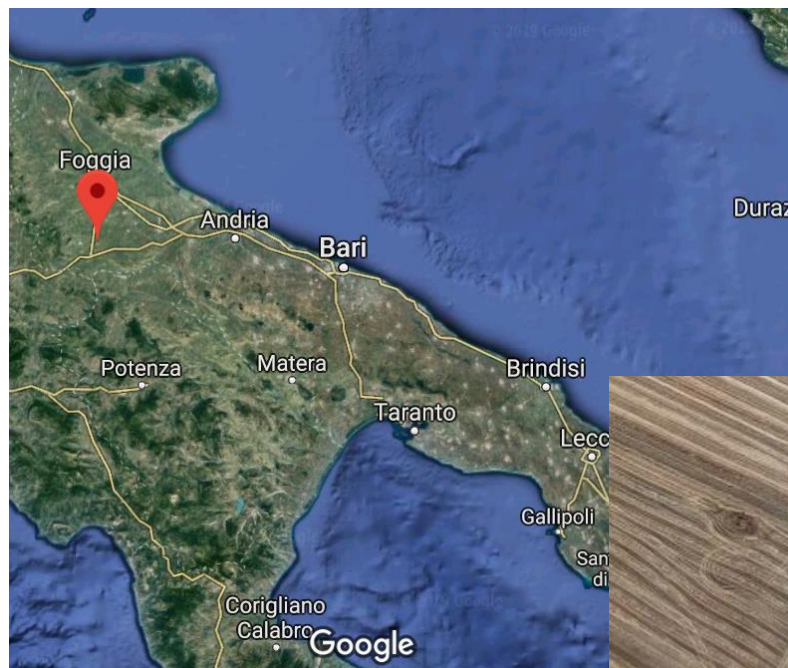
Enable emergency configuration

The emergency configuration is triggered in case of oil moisture sensors failure

Save
Reset

IR2MA demonstration activities: testing sensor-based and DSS-based irrigation management in commercial greenhouses

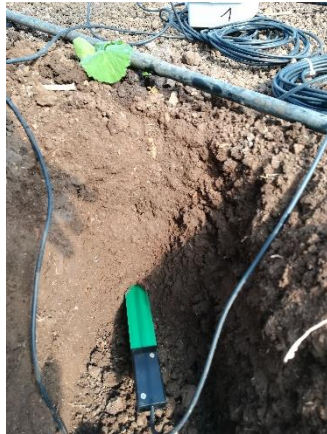
Interreg
Greece-Italy
IR2MA
European Regional Development Fund



<http://80.241.136.71/legacy/pages/login.html>

<https://web.bluleaf.it/>

≈35% water saving





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